

## VertiSep™ Packings Specification

Silica-Based Packings										
Packings	Base Material	Particle Shape	Particle Size (µm)	Carbon Load (%)	Pore Size (Å)	Pore Volume (mL/g)	Surface Area (m <sup>2</sup> /g)	Phase Bonding	End Capped	USP L-Code
<b>VertiSep™ UPS</b>										
C18	Silica	Spherical	3,5,10	17	100	1.1	450	Monomeric	Yes	L1
C8	Silica	Spherical	3,5,10	9	100	1.1	450	Monomeric	Yes	L7
PH	Silica	Spherical	3,5,10	9.5	100	1.1	450	Monomeric	Yes	L11
CN	Silica	Spherical	3,5,10	4	100	1.1	450	Monomeric	No	L10
Si	Silica	Spherical	3,5,10	-	100	1.1	450	-	No	L3
HILIC	Silica	Spherical	3,5,10	-	100	1.1	450	-	No	L3
PFP	Silica	Spherical	3,5,10	-	100	1.1	450	-	No	L43
<b>VertiSep™ AQS</b>										
C18	Silica	Spherical	3,5,10	15	120	1.0	300	Monomeric	Yes	L1
C8	Silica	Spherical	3,5,10	8	120	1.0	300	Monomeric	Yes	L7
Ph	Silica	Spherical	3,5,10	7	120	1.0	300	Monomeric	Yes	L11
CN	Silica	Spherical	3,5,10	4	120	1.0	300	Monomeric	No	L10
NH2	Silica	Spherical	3,5,10	3	120	1.0	300	Monomeric	No	L8
Si	Silica	Spherical	3,5,10	-	120	1.0	300	-	No	L3
Diol	Silica	Spherical	3,5,10	-	120	1.0	300	Monomeric	No	L20
<b>VertiSep™ HCS</b>										
C18	Silica	Spherical	3,5,10	23	100	1.0	350	Polymeric	Yes	L1
C8	Silica	Spherical	3,5,10	13	100	1.0	350	Polymeric	Yes	L7
PH	Silica	Spherical	3,5,10	8	100	1.0	350	Polymeric	Yes	L11
C4	Silica	Spherical	3,5,10	6	100	1.0	350	Polymeric	Yes	L26
CN	Silica	Spherical	3,5,10	4	100	1.0	350	Polymeric	Yes	L10
NH2	Silica	Spherical	3,5,10	3	100	1.0	350	Polymeric	No	L8
Si	Silica	Spherical	3,5,10	-	100	1.0	350	-	No	L3
<b>VertiSep™ BDS</b>										
C18	Silica	Spherical	3,5	11	140	0.6	150	Monomeric	Yes	L1
C8	Silica	Spherical	3,5	6	140	0.6	150	Monomeric	Yes	L7
Ph	Silica	Spherical	3,5	5	140	0.6	150	Monomeric	Yes	L11
CN	Silica	Spherical	3,5	4	140	0.6	150	Monomeric	Yes	L10
<b>VertiSep™ EPS</b>										
C18	Silica	Spherical	3,5,10	11	100	1.1	450	Monomeric	No	L1
C8	Silica	Spherical	3,5,10	6	100	1.1	450	Monomeric	No	L7
Ph	Silica	Spherical	3,5,10	5	100	1.1	450	Monomeric	No	L11
CN	Silica	Spherical	3,5,10	4	100	1.1	450	Monomeric	No	L10
Si	Silica	Spherical	3,5,10	-	100	1.1	450	-	No	L3
<b>VertiSep™ BIO</b>										
C30	Silica	Spherical	3,5,10	20	200	1.1	200	Monomeric	Yes	L62
C18	Silica	Spherical	3,5,10	8	300	0.9	100	Monomeric	Yes	L1
C8	Silica	Spherical	3,5,10	6	300	0.9	100	Monomeric	Yes	L7
C4	Silica	Spherical	3,5,10	4	300	0.9	100	Monomeric	Yes	L26
<b>VertiSep™ GES</b>										
C18	Silica	Spherical	3,5,10	17	120	1.0	300	Polymeric	Yes	L1
C8	Silica	Spherical	3,5,10	13	120	1.0	300	Polymeric	Yes	L7
Ph	Silica	Spherical	3,5,10	8	120	1.0	300	Polymeric	Yes	L11
C4	Silica	Spherical	3,5,10	6	120	1.0	300	Polymeric	Yes	L26
CN	Silica	Spherical	3,5,10	3.5	120	1.0	300	Polymeric	Yes	L10
NH2	Silica	Spherical	3,5,10	3	120	1.0	300	Polymeric	No	L8
Si	Silica	Spherical	3,5,10	-	120	1.0	300	-	No	L3
SAX	Silica	Spherical	3,5,10	4	120	1.0	300	Polymeric	No	L14
SCX	Silica	Spherical	3,5,10	4	120	1.0	300	Polymeric	No	L19

# Introduction

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Silica-Based Packings										
Packings	Base Material	Particle Shape	Particle Size (µm)	Carbon Load (%)	Pore Size (Å)	Pore Volume (mL/g)	Surface Area (m <sup>2</sup> /g)	Phase Bonding	End Capped	USP L-Code
<b>VertiSep™ IRS</b>										
C18	Silica	Irregular	10	10	125	1.0	300	Monomeric	Yes	L1
Ph	Silica	Irregular	10	8	125	1.0	300	Monomeric	Yes	L11
CN	Silica	Irregular	10	6	125	1.0	300	Monomeric	Yes	L10
NH2	Silica	Irregular	10	4	125	1.0	300	Monomeric	No	L8
Si	Silica	Irregular	10	-	125	1.0	300	-	No	L3
<b>VertiSep™ MMS</b>										
CN/NH2	Silica	Spherical	5	16	60	1.0	450	Monomeric	No	L18
C8/NH2	Silica	Spherical	5	11	60	1.0	450	Monomeric	No	L28
C8/C18	Silica	Spherical	5	14	60	1.0	450	Monomeric	Yes	L42
C8/SCX	Silica	Spherical	5	9	60	1.0	450	Monomeric	No	L44
C8/SAX	Silica	Spherical	5	9	60	1.0	450	Monomeric	No	-
Ph/C6	Silica	Spherical	5	9	60	1.0	450	Monomeric	Yes	L11
<b>VertiSep™ SPS</b>										
ODS1	Silica	Spherical	3,5,10	6	80	0.5	220	Monomeric	Yes	L1
ODS2	Silica	Spherical	3,5,10	12	80	0.5	220	Monomeric	Yes	L1
C8	Silica	Spherical	3,5,10	6	80	0.5	220	Monomeric	Yes	L7
C6	Silica	Spherical	3,5,10	5	80	0.5	220	Monomeric	Yes	L15
Ph	Silica	Spherical	3,5,10	3	80	0.5	220	Monomeric	Yes	L11
C4	Silica	Spherical	3,5,10	3	80	0.5	220	Monomeric	Yes	L26
CN	Silica	Spherical	3,5,10	3	80	0.5	220	Monomeric	No	L10
NH2	Silica	Spherical	3,5,10	2	80	0.5	220	Monomeric	No	L8
Si	Silica	Spherical	3,5,10	-	80	0.5	220	-	No	L3
SAX	Silica	Spherical	5,10	4	80	0.5	220	Monomeric	No	L14
SCX	Silica	Spherical	5,10	4	80	0.5	220	Monomeric	No	L9

Polymer-Based Packings										
Packings	Base Material	Ionic Form	Particle Shape	Particle Size (µm)	Carbon Load (%)	Cross Linked (%)	USP L-Code			
<b>VertiSep™ PRP</b>										
PRP-L21	Polymer	-	Spherical	5,10	-	-	L21			
PRP-AQ	Polymer	-	Spherical	5	-	-	-			
PRP-C18	Polymer	-	Spherical	5	17	-	-			
PRP-C8	Polymer	-	Spherical	5	10	-	-			
PRP-NH2	Polymer	-	Spherical	5	6	-	-			
<b>VertiSep™ SUGAR</b>										
CMP	Polymer	Calcium	Spherical	9	-	8	L19			
SOP	Polymer	Silver	Spherical	10,20	-	8	-			
LMP	Polymer	Lead	Spherical	8	-	8	L34			
HMP	Polymer	Hydrogen	Spherical	8	-	8	L17			
<b>VertiSep™ OA</b>										
OA	Polymer	Hydrogen	Spherical	8	-	8	L22			
<b>VertiSep™ IC</b>										
Anion AX1	Polymer	-	Spherical	5	-	-	L23			
Anion AX2	Polymer	-	Spherical	5	-	-	L31			
Anion AX300	Polymer	-	Spherical	5	-	-	L31			
Cation CX1	Polymer	-	Spherical	5	-	-	L53			